

Applic. No. 10/007,390

Amdt. dated June 14, 2004

Reply to Office action of March 11, 2004

Claim Amendments

Claim 1 (currently amended): An electrical resistor,  
comprising:

a resistance zone formed of a metal alloy;

connections;

electrically conductive power supply leads constructed as  
busbars; and

an insulating layer between said power supply leads for  
electrically insulating and thermally coupling said power  
supply leads;

said power supply leads connected to said connections;

said power supply leads running parallel to one another;

said power supply leads having ends remote from said  
resistance zone;

said ends of said power supply leads being constructed as  
connection contacts;

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~~a construction including~~ said resistance zone and said power supply leads, except for said connection contacts, being completely embedded in an encapsulation of electrically insulating and thermally conducting material, and

~~another electrically insulating and thermally conducting layer surrounding said construction.~~

Claim 2 (cancelled)

Claim 3 (currently-amended): The electrical resistor according to claim 1, comprising:

an electrically and thermally conducting layer ~~surrounding encapsulating said construction and said other insulating layer encapsulation.~~

Claim 4 (original): The electrical resistor according to claim 1, wherein said power supply leads are intermeshed in one another.

Claim 5 (original): The electrical resistor according to claim 1, wherein said power supply leads are of coaxial design.

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Claim 6 (original): The electrical resistor according to claim 1, wherein said power supply leads are configured in a manner selected from the group consisting of being stacked and being rolled up like a wound capacitor.

Claim 7 (currently amended): An electrical resistor assembly, comprising:

an electrical resistor to be protected from adjacent structural parts producing heat or cold, said electrical resistor including:

a resistance zone formed of a metal alloy;

connections;

electrically conductive power supply leads constructed as busbars; and

an insulating layer between said power supply leads for electrically insulating and thermally coupling said power supply leads;

said power supply leads connected to said connections;

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said power supply leads running parallel to one  
another;

said power supply leads having ends remote from said  
resistance zone;

said ends of said power supply leads being constructed  
as connection contacts; and

~~a construction including~~ said resistance zone and said  
power supply leads, except for said connection  
contacts, being completely embedded in an encapsulation  
of electrically insulating and thermally conducting  
material; and

~~another electrically insulating and thermally~~  
~~conducting layer surrounding said construction; and~~

a protective barrier made of thermally non-conducting material  
disposed between said electrical resistor and the adjacent  
structural parts producing heat or cold.

Claim 8 (currently amended): An electrical resistor,  
comprising:

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a resistance zone;

connections having dimensions;

electrically conductive power supply leads constructed as  
busbars, said electrically conductive power supply leads  
having a width and a thickness corresponding to said  
dimensions of said connections; and

an insulating layer between said power supply leads for  
electrically insulating and thermally coupling said power  
supply leads;

said power supply leads connected to said connections;

said power supply leads running parallel to one another;

said power supply leads having ends remote from said  
resistance zone; and

said ends of said power supply leads being constructed as  
connection contacts;

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~~a construction including~~ said resistance zone and said power supply leads, except for said connection contacts, being completely embedded in an encapsulation of electrically insulating and thermally conducting material, and

~~another electrically insulating and thermally conducting layer surrounding said construction.~~

Claim 9 (previously presented): The electrical resistor according to claim 1, wherein said connections have dimensions and said electrically conductive power supply leads have a width and thickness corresponding to said dimensions of said connections.

Claim 10 (previously presented): The electrical resistor according to claim 1, wherein said metal alloy is manganin.

Claim 11 (previously presented): The electrical resistor according to claim 7, wherein said metal alloy is manganin.